

Case 3634

OMALIIDAE Handlirsch, 1904 (Insecta, Archaeorthoptera) and XENOPTERIDAE Pinto, 1986 (Insecta, Megasecoptera): proposed emendation to OMALIAIDAE and XENOPTERAIDAE respectively to remove homonymy with OMALIINAE MacLeay, 1825 (Insecta, Coleoptera) and XENOPTERIDAE Riek, 1955 (Insecta, Orthoptera)

Andrew J. Ross

Department of Natural Sciences, National Museums Scotland, Chambers St., Edinburgh, EH1 1JF, U.K. (e-mail: a.ross@nms.ac.uk)

David B. Nicholson

Department of Earth Sciences, The Natural History Museum, Cromwell Road, London, SW7 5BD, U.K. (e-mail: david.nicholson@nhm.ac.uk)

Ed A. Jarzembowski

State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Nanjing 210008, China & Department of Earth Sciences, The Natural History Museum, Cromwell Road, London, SW7 5BD, U.K. (e-mail: jarzembowski2@live.co.uk)

Abstract. The purpose of this application, under Articles 29 and 55.3 of the Code, is to remove the homonymy between the family-group names OMALIDAE Handlirsch, 1904 (Insecta, Archaeorthoptera) and OMALIDAE MacLeay, 1825 (Insecta, Coleoptera), which are homonyms due to the similarity of the names of their respective type genera *Omalia* Beneden & Coemans, 1867 and *Omalium* Gravenhorst, 1802, and between the family-group names XENOPTERIDAE Pinto, 1986 (Insecta, Megasecoptera) and XENOPTERIDAE Riek, 1955 (Insecta, Orthoptera), which are homonyms due to the similarity of the names of their respective type-genera *Xenoptera* Pinto, 1986 and *Xenopterum* Riek, 1955. It is proposed that the stem of the generic name *Omalia* be emended to *Omalia-* to give OMALIAIDAE, while leaving the beetle family name unaltered, and that the stem of the generic name *Xenoptera* be emended to *Xenoptera-* to give XENOPTERAIDAE, while leaving the orthopteran family name unaltered.

Keywords. Nomenclature; taxonomy; Insecta; Protorthoptera; Coleoptera; Archaeorthoptera; Megasecoptera; Orthoptera; OMALIIDAE; XENOPTERIDAE; insects; Carboniferous.

1. During a search to update the fossil record of insect families since Ross & Jarzembowski (1993), for a PhD by Nicholson (2012), two junior homonymous family names were encountered.

2. The family OMALIDAE Handlirsch, 1904 (p. 13) was erected for the type genus *Omalia* Beneden & Coemans, 1867 (p. 392), (Insecta, Protorthoptera), the stem being *Oмали-*. However, this family name is a junior homonym of OMALIDAE MacLeay, 1825 (p. 49) (Insecta, Coleoptera), and is now considered to be a subfamily of STAPHYLINIDAE (see Bouchard et al., 2011, p. 175), spelling corrected to OMALIINAE. Although MacLeay (1825) does not mention a type genus, this is given as *Omalium* Gravenhorst, 1802 (p. 111) in Newton & Thayer (1992, p. 57) and Herman (2001, p. 210), the stem is therefore *Oмали-*. The spelling OMALIDAE MacLeay, 1825 was at some stage corrected to OMALIIDAE and this spelling has been in use since at least 1893 (see Lewis, 1893). OMALIDAE Handlirsch, 1904 was corrected to OMALIIDAE by Handlirsch (1919, p. 552), and the emended spelling has been used ever since, e.g. Carpenter (1992, p. 121, authorship incorrectly attributed to Handlirsch, 1906 in 1906–08). Brauckmann & Hahn (1980, p. 303) considered OMALIIDAE Handlirsch, 1904 to be a nomen nudum, however the original use is clearly accompanied by the type genus and species names with their primary reference and the locality and a detailed description (with a figure) of the type specimen. This satisfies Articles 11 & 12 of the Code that the name is available. Kukalová-Peck & Brauckmann (1992, p. 2454) gave the correct authorship (OMALIIDAE Handlirsch, 1904) though they synonymised the family with GERARIDAE Scudder, 1885. However, this synonymy was not followed by Béthoux & Nel (2002, 2005), who regarded OMALIIDAE Handlirsch, 1904 as unplaced in the superorder Archaeorthoptera. In order to remove the homonymy, following the Principle of Priority and because the OMALIINAE MacLeay is highly diverse with 1458 included species (according to Herman, 2001, p. 209), it is proposed that the stem of the generic name *Omalia*, currently *Oмали-* be emended to *Omalia-* giving OMALIAIDAE.

3. The family XENOPTERIDAE Pinto, 1986 (p. 25) was erected for the type genus *Xenoptera* Pinto, 1986 (Insecta, Megasecoptera), the stem being *Xenopter-*. However this family name is a junior homonym of XENOPTERIDAE Riek, 1955 (p. 687) based on the type genus *Xenopterum* Riek, 1955 (Insecta, Orthoptera), the stem being *Xenopter-*. The homonymy was noted by Ross & Jarzembowski (1993, p. 369) but has not been subsequently dealt with. Sharov (1968, p. 41) synonymised XENOPTERIDAE Riek, 1955 with TRIASSOMANTEIDAE Tillyard, 1922 however Gorokhov (1989, 2005) took the family out of synonymy and added more species. In order to remove the homonymy, following the Principle of Priority and because XENOPTERIDAE Riek is more diverse with 17 included species (see Gorokhov, 2005, p. 181), it is proposed that the stem of the generic name *Xenoptera*, currently *Xenopter-* be emended to *Xenoptera-* to give XENOPTERAIDAE.

4. There is also another family-group homonym – XENOPTERINAE Gill, 1878 (p. 792) (a junior synonym of TETRAODONTINAE Bonaparte, 1832 (p. 163) and a senior synonym of CHORNERHINIDAE Gill, 1884 (p. 423)). This name is based on *Xenopterus* Troschel 1856 (p. 88), which is an unjustified emendation of *Xenoptere* Bibron in Duméril, 1855 (p. 281), if the Commission accepts removal of accents as correct latinisation of the gallic name *Xénoptère* nec *Xenopterus* as proposed by Kottelat (2001). *Xenoptere* is a junior synonym of *Chonerhinos* Bleeker, 1854 (p. 259) (see Kottelat, 1999). It is not necessary to request a solution in this application because the family-group name is in synonymy and is likely to be a nomen oblitum.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that for the purposes of Article 29 of the Code:
 - (a) the stem of the generic name *Omalia* Beneden & Coemans, 1867 is *Omalia-*;
 - (b) the stem of the generic name *Xenoptera* Pinto, 1986 is *Xenoptera-*;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Omalia* Beneden & Coemans, 1867 (gender: feminine), type species by monotypy *Omalia macroptera* Beneden & Coemans, 1867;
 - (b) *Omalium* Gravenhorst, 1802 (gender: neuter), type species by subsequent designation *Staphylinus rivularis* Paykull, 1789;
 - (c) *Xenoptera* Pinto, 1986 (gender: feminine), type species by monotypy *Xenoptera riojaensis* Pinto, 1986;
 - (d) *Xenopterum* Riek, 1955 (gender: neuter), type species by monotypy *Xenopterum crosbyi* Riek, 1955;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *crosbyi* Riek, 1955, as published in the binomen *Xenopterum crosbyi*;
 - (b) *macroptera* Beneden & Coemans, 1867, as published in the binomen *Omalia macroptera*;
 - (c) *riojaensis* Pinto, 1986, as published in the binomen *Xenoptera riojaensis*;
- (4) to place on the Official List of Family Group Names in Zoology the following names:
 - (a) OMALIAIDAE Handlirsch, 1904, type genus *Omalia* Beneden & Coemans, 1867, spelling emended by ruling in (1)(a) above (Insecta, Archaeorthoptera);
 - (b) OMALIIDAE MacLeay, 1825, type genus *Omalium* Gravenhorst, 1802 (Insecta, Coleoptera);
 - (c) XENOPTERAIDAE Pinto, 1986, type genus *Xenoptera* Pinto, 1986, spelling emended by ruling in (1)(b) above (Insecta, Megasecoptera);
 - (d) XENOPTERIDAE Riek, 1955, type genus *Xenopterum*, Riek, 1955 (Insecta, Orthoptera);
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names:
 - (a) OMALIDAE Handlirsch, 1904, spelling emended to OMALIAIDAE, as ruled in (1)(a) above (Insecta, Archaeorthoptera);
 - (b) XENOPTERIDAE Pinto, 1986, spelling emended to XENOPTERAIDAE by ruling in (1)(b) above (Insecta, Megasecoptera).

Acknowledgements

Many thanks to our anonymous reviewers for assistance and constructive comments on these proposed emendations, and for C.A.S. grant 2011T2Z04 to E.A.J.

References

- Beneden, P.-J. van & Coemans, E. 1867. Un insecte et un gastéropode pulmoné du terrain houiller. *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux-arts de Belgique*, (2)23: 384–401.
- Béthoux, O. & Nel, A. 2002. Venation pattern and revision of Orthoptera *sensu nov.* and sister groups. Phylogeny of Palaeozoic and Mesozoic Orthoptera *sensu nov.* *Zootaxa*, 96: 1–88.

- Béthoux, O. & Nel, A.** 2005. Some Palaeozoic 'Protorthoptera' are 'ancestral' orthopteroids: major wing braces as clues to a new split among the 'Protorthoptera' (Insecta). *Journal of Systematic Palaeontology*, **2**(4): 285–309.
- Bleeker, P.** 1854. Vijfde bijdrage tot de kennis der ichthyologische fauna van Celebes. *Natuurkundig Tijdschrift voor Nederlandsch Indië*, **7**: 225–260.
- Bonaparte, C.L.** 1832. Saggio d'una distribuzione metodica degli Animali Vertebrati a sangue freddo. *Giornale Arcadico di Scienze Lettere ed Arti*, **52**: 129–209.
- Bouchard, P., Bousquet, Y., Davies, A.E., Alonso-Zarazaga, M.A., Lawrence, J.F., Lyal, C.H.C., Newton, A.F., Reid, C.A.M., Schmitt, M., Ślipiński, S.A. & Smith, A.B.T.** 2011. Family-group names in Coleoptera (Insecta). *ZooKeys*, **88**: 1–972.
- Brauckmann, C. & Hahn, G.** 1980. Ein neuer Insektenfund aus dem Westfalium von Ibbenbüren (Westdeutschland). *Paläontologische Zeitschrift*, **54**(3–4): 301–312.
- Carpenter, F.M.** 1992. *Treatise on Invertebrate Paleontology, Part R, Arthropoda 4*, **3**: 1–227.
- Duméril A.** 1855. Note sur un travail inédit de Bibron relatif aux poissons plectognathes gymnodontes (diodons et tétrodons). *Revue et Magasin de Zoologie Pure et Appliquée*, (2)**7**: 274–282.
- Gill, T.** 1878. Tetrodontidae. P. 792 in *Johnson's new universal cyclopaedia: scientific and popular treasury of useful knowledge*. A.J. Johnson & Co., New York.
- Gill, T.** 1884. Synopsis of the plectognath fishes. *Proceedings of the United States National Museum*, **7**: 411–427.
- Gorokhov, A.V.** 1989. New taxa of the orthopteran Families Bintoniellidae, Xenopteridae, Permelcanidae, Elcanidae and Vitimiidae (Orthoptera, Ensifera) from the Mesozoic of Asia. *Vestnik Zoologii*, **1989**(4): 20–27.
- Gorokhov, A.V.** 2005. Review of Triassic Orthoptera with descriptions of new and little known taxa: part 1. *Paleontological Journal*, **39**(2): 178–186.
- Gravenhorst, J.L.C.** 1802. *Coleoptera Microptera Brunsvicensia nec non Exoticorum quotquot exstant in collectionibus Entomologorum Brunsvicensium in genera familias et species*. 206 pp. Reichard, Brunswick.
- Handlirsch, A.** 1904. Les Insectes Houilliers de la Belgique. *Mémoires du Musée Royal d'Histoire Naturelle de Belgique*, **3**: 3–20.
- Handlirsch, A.** 1906–08. *Die Fossilen Insekten und die Phylogenie der Rezenten Formen*. 1430 pp. Wilhelm Engelmann, Leipzig.
- Handlirsch, A.** 1919. Revision der Paläozoischen Insekten. *Denkschriften der Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse*, **96**: 512–592.
- Herman, L.H.** 2001. Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. I. Introduction, history, biographical sketches, and omaliine group. *Bulletin of the American Museum of Natural History*, **265**: 1–649.
- Kottelat, M.** 1999. Nomenclature of the genera *Barbados*, *Cyclocheilichthys*, *Rasbora* and *Chonerhinos* (Teleostei: Cyprinidae and Tetraodontidae), with comments on the definition of the first reviser. *Raffles Bulletin of Zoology*, **47**(2): 591–600.
- Kottelat, M.** 2001. Nomenclatural status of names of tetraodontiform fishes based on Bibron's unpublished work. *Zoosystema*, **23**(3): 605–618.
- Kukalová-Peck, J. & Brauckmann, C.** 1992. Most Palaeozoic Protorthoptera are ancestral hemipteroids: major wing braces as clues to a new phylogeny of Neoptera (Insecta). *Canadian Journal of Zoology*, **70**: 2452–2473.
- Lewis, G.** 1893. On a new beetle from Japan (Omaliidae). *Annals & Magazine of Natural History*, (6)**11**: 394–395.
- MacLeay, W.S.** 1825. *Number I. of Annulosa Javanica, or an attempt to illustrate the natural affinities and analogies of the insects collected in Java by Thomas Horsfield, M.D. F.L. & G.S. and deposited by him in the museum of the Honourable East-India Company*. 50 pp. Kingsbury, Parbury & Allen, London.
- Newton, A.F. & Thayer, M.K.** 1992. Current classification and family-group names in Staphyliniformia (Coleoptera). *Fieldiana, Zoology, new series*, **67**: 1–92.
- Nicholson, D.B.** 2012 (unpublished). *Fossil perspectives on the evolution of insect diversity*. PhD thesis, University of York. 421 pp.
- Paykull, G.** 1789. *Monographia Staphylinorum Sveciae*. 138 pp. J. Edman, Upsaliae.

- Pinto, I.D.** 1986. Carboniferous insects from Argentina III - Familia Xenopteridae Pinto, nov. Ordo Megasecoptera. *Pesquisas*, **18**: 23–29.
- Riek, E.F.** 1955. Fossil insects from the Triassic beds at Mt. Crosby, Queensland. *Australian Journal of Zoology*, **3**(4): 654–691.
- Ross, A.J. & Jarzembowski, E.A.** 1993. Arthropoda (Hexapoda; Insecta). Pp. 363–426 in Benton, M.J. (Ed.), *The Fossil Record 2*. Chapman & Hall, London.
- Scudder, S.H.** 1885. Palaeodictyoptera: or the affinities and classification of Paleozoic Hexapoda. *Memoirs of the Boston Society of Natural History*, **3**(11): 319–351.
- Sharov, A.G.** 1968. Phylogeny of the Orthopteroidea. *Trudy Paleontologicheskogo Instituta*, **118**: 1–216.
- Tillyard, R.J.** 1922. Mesozoic Insects of Queensland. No. 9. Orthoptera, and additions to the Protorthoptera, Odonata, Hemiptera and Planipennia. *Proceedings of the Linnean Society of New South Wales*, **47**: 447–470.
- Troschel, F. H.** 1856. Bericht über die Leistungen in der Ichthyologie während des Jahres 1855. *Archiv für Naturgeschichte*, **22**(2): 67–89.

Acknowledgement of receipt of this application was published in BZN **70**: 151.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).